

## **REMARKS**

### **DRAWINGS**

Applicants have noticed that the Examiner has not indicated in the Office Action Summary (PTOL-326) whether the submitted drawings have been accepted. Applicants respectfully request the Examiner to indicate whether the drawings submitted for the present Application were accepted or objected to by the Examiner.

### **DETAILED DESCRIPTION OF THE INVENTION**

Applicant respectfully submits that the amendments to the Detailed Description of the Invention, does not add any new matter, since the amendments were performed to correct typographical errors.

### **CLAIMS**

#### **REJECTION OF CLAIMS 19-27 UNDER 35 U.S.C. § 101**

Claims 19-27 were rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. The Office Action states:

Claims 19-27 are drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1(a) (Functional Descriptive Material) states:

"Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer."

"Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the

invention which permit the data structure's functionality to be realized."

Claims 19-27, while defining a program, does not define a "computer-readable medium" and is thus non-statutory for that reasons. A program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" in order to make the claim statutory.

See Office Action at pages 2-3.

The Applicant respectfully submits that Claims 19-27, as presented in the Listing of the (Amended) Claims are in compliance with 35 U.S.C. § 101. Applicant requests withdrawal of this rejection.

#### **REJECTION OF CLAIMS 1-27 UNDER 35 U.S.C. § 103(a)**

Claims 1-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,116,441 ("Matsuoka").

#### **Independent Claim 1**

Regarding Claim 1, the Office Action states:

With regard to claim 1, Matsuoka discloses a method that maps any input color from an image to an output color, the method using a two-dimensional lookup table that contains mapping for a portion of the colors of the image and using color information associated with an input color from the image (column 20, lines 39-49).

Matsuoka discloses mapping printer gamut information and monitor gamut information with reference to monitor gamut information (column 20, line 53 - column 21, line 7); and interpolator computes CMYK data to be output based on RGB data input from a terminal 1212 by interpolation using the LUT stored in

the RAM 1202, and outputs the CMYK data to a terminal 1213 (column 20, lines 39-49).

Matsuoka does not exactly teach determining mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color.

Since Matsuoka's invention is implemented in a computer and a computer can only represent a number to it's [sic] nearest value (e.g., 2.333.....forever [sic], can be represented by a limit [sic] amount of decimal digits).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have recognized Matsuoka is [sic] having determining mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color, or at least obvious to provide functional part for performing mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color.

*See* Office Action at pages 3-4.

Claim 1 recites "A method that maps any input color from an image to an output color, the method using a two-dimensional lookup table that contains mapping for a portion of the colors of the image and using color information associated with an input color from the image, the method comprising: determining mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color."

The Office Action references Matsuoka, at col. 20, lines 39-49, which states:

Referring to FIG. 20, an LUT generator 1201 generates a look-up table

(LUT) for converting image data RGB into CMYK when its units operate in the designated procedure. An LUT generated by the LUT generator 1201 is stored in a RAM 1202. An interpolator 1203 computes CMYK data to be output based on RGB data input from a terminal 1212 by interpolation using the LUT stored in the RAM 1202, and outputs the CMYK data to a terminal 1213. Note that RGB image data held in the main memory 202 is input from the terminal 1212 in a raster scan order. The CMYK data output from the terminal 1213 is sent to the color printer 209.

The Applicant respectfully submits that Matsuoka does not teach what is recited in Claim

1. Applicant respectfully submits that Matsuoka, at col. 20, lines 39-49 does not disclose anything about “a two dimensional lookup table,” as recited in Claim 1. Instead, Matsuoka discloses converting RGB (red, green, blue) to CMYK, which would use a three-dimensional lookup table. Further, since Matsuoka discloses that “a gamut is expressed in a three-dimensional space in practice,” (see Matsuoka, at col. 24, lines 13-14), the Applicant respectfully submits that the Examiner has not shown a teaching of what is recited in Claim 1. Thus, for at least this reason, the Examiner does not show a teaching of what is recited in Claim 1.

In addition, the Examiner admits that “Matsuoka does not exactly teach determining mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color.” However, the Examiner believes that he shows a teaching of Claim 1 by stating that “Since Matsuoka's invention is implemented in a computer and a computer can only represent a number to it's [sic] nearest value (e.g., 2.333.....forever, can be represented by a limit [sic] amount of decimal digits).” Applicant respectfully submits that Examiner's statement is not supported with any evidence. Furthermore, it appears that the Examiner does not clearly show how he arrives at the conclusion that “a computer can only

represent a number to its nearest value” does not show a teaching of the elements recited in Claim 1. Applicant does not see how a statement concerning computers and how it represents a number to its nearest value is relevant to “determining mapping information for table entries.” Therefore, for at least the foregoing reasons, the Applicant believes that the Examiner does not show a teaching of Claim 1. Furthermore, for example, Matsuoka does not teach “interpolating the mapping information for the *nearest table entries* to obtain color information for an output color,” as recited in Claim 1 (emphasis denoted in *italics*). Applicant respectfully submits that the Examiner must show a teaching of each and every element of what is recited in Claim 1, if he wishes to maintain this rejection. Therefore, for at least the foregoing reasons, the Office Action has not shown a teaching of what is recited in Claim 1. Thus, the Applicant believes that Claim 1 contains patentable subject matter. Consequently, the Applicant respectfully submits that Claim 1 should be advanced to allowance.

The Applicant respectfully submits that based on the foregoing reasons, independent Claim 1 contains patentable subject matter and should be allowed. As a result of providing the foregoing arguments with respect to independent Claim 1, the Applicant may not have commented on all the remarks made by the Examiner regarding dependent Claims 2-9 but reserves the right to do so in the future should the need arise. Since Claims 2-9 depend on allowable Claim 1, Applicant respectfully submits that Claims 2-9 are in condition for allowance. The Applicant respectfully requests that Claims 1-9 be allowed.

**Dependent Claims 2 and 4-6**

Dependent Claims 2 and 4-6 were amended to correct typographical errors and/or antecedent basis issues. Applicant respectfully submits that these claims are in condition for allowance.

### **Independent Claim 10**

Regarding Claim 10, the Office Action states:

Claim 10 is the system claim corresponding with method steps in claim 1 with operation corresponding directly to the steps in method of claim 1. Therefore claim 10 is rejected as set forth above for claim 1.

See Office Action at page 8.

Claim 10 recites “A system that maps any input color from an image to an output color, the system comprising: a two-dimensional lookup table that contains mapping for a portion of the colors of the image; and at least one processor capable of determining mapping information for table entries nearest to an input color, the at least one processor capable of interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color.”

In response to Examiner’s remarks to Claim 10, the Applicant respectfully submits that the Examiner has not shown a teaching of what is recited in Claim 10 since he has not shown a teaching of what is recited in Claim 1. Applicant respectfully requests the Examiner to refer to Applicant’s arguments for Claim 1. For example, as was stated in Claim 1, Applicant respectfully submits that Matsuoka does not disclose a “two-dimensional lookup table” as recited in Claims 1 and 10. Nor does the Examiner show a teaching of “*at least one processor* capable of determining mapping information for *table entries nearest to an input color*,” as recited in the second clause of Claim 10 (emphasis denoted in italics). Based on Applicant’s argument

provided in Claim 1, Applicant respectfully submits that Claim 10 contains patentable subject matter. Consequently, the Applicant respectfully submits that Claim 10 should be advanced to allowance.

The Applicant respectfully submits that because of the foregoing reasons, independent Claim 10 contains patentable subject matter and should be allowed. As a result of providing the foregoing arguments, the Applicant may not have commented on all the remarks made by the Examiner regarding dependent Claims 11-18 but reserves the right to do so in the future should the need arise. Since Claims 11-18 depend on allowable Claim 10, Applicant respectfully submits that Claims 11-18 are in condition for allowance. The Applicant respectfully requests allowance of Claims 10-18.

#### **Dependent Claim 11**

Dependent Claim 11 was amended to correct a typographical error. Applicant respectfully submits that this claim is in condition for allowance.

#### **Independent Claim 19**

Regarding Claim 19, the Office Action states:

Claim 19 is the system claim corresponding with method steps in claim 1 with operation corresponding directly to the steps in method of claim 1. Therefore claim 19 is rejected as set forth above for claim 1.

*See* Office Action at page 10.

Claim 19 recites "A computer-readable medium having stored thereon, a computer program having at least one code section that maps any input color from an image to an output

color using a two-dimensional lookup table that contains mapping for a portion of the colors of the image and using color information associated with an input color from the image, the at least one code section being executable by a computer for causing the computer to perform steps comprising: determining mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color.”

In response to the Examiner’s remarks to Claim 19, the Applicant respectfully submits that the Examiner has not shown a teaching of what is recited in Claim 19 since he has not shown a teaching of what is recited in Claim 1. Since the Examiner has rejected Claim 19 “as set forth above for Claim 1,” the Applicant respectfully requests the Examiner to refer to Applicant’s arguments for Claim 1 in this Response.

The Applicant respectfully submits that because of the reasons provided in Applicant’s argument for Claim 1, independent Claim 19 contains patentable subject matter and should be allowed. As a result of providing the foregoing arguments, the Applicant may not have commented on all the remarks made by the Examiner regarding dependent Claims 20-27 but reserves the right to do so in the future should the need arise. Since Claims 20-27 depend on allowable Claim 19, Applicant respectfully submits that Claims 20-27 are in condition for allowance. The Applicant respectfully requests allowance of Claims 19-27.

#### **Dependent Claim 20**

Dependent Claim 20 was amended to correct a typographical error. Applicant respectfully submits that this claim is in condition for allowance.



#### **NEW CLAIMS 28-30**

New independent Claim 28 and dependent Claims 29-30 have been added. Independent Claim 28 recites “A method for performing color mapping of a pixel in a video image using a first pair of red chrominance and blue chrominance values, and a first luminance value, said method comprising: indexing a two dimensional lookup table using said first pair of red chrominance and blue chrominance values; adding an offset value to said first luminance value to generate a second luminance value; outputting a second pair of red chrominance and blue chrominance values based on said indexing; and outputting said second luminance value.”

Applicant respectfully submits that independent Claim 28 contains patentable subject matter since, for example, Matsuoka does not teach anything about “indexing a two dimensional look-up table using a first pair of red chrominance and blue chrominance values,” as recited in Claim 28. Furthermore, Matsuoka does not disclose “indexing a two dimensional look-up table,” as recited in Claim 28. Therefore, the Applicant respectfully submits that Claim 28 contains patentable subject matter. Thus, Claim 28 should be passed to allowance. Furthermore, the Applicant respectfully submits that dependent Claims 29-30 are allowable because, among other things, Claims 29-30 depend on an allowable Claim 28. Therefore, Claims 28-30 should be passed to allowance.

#### **NEW CLAIMS 31-35**

New independent Claim 31 and dependent Claims 32-35 have been added. Independent Claim 31 recites “A system for performing color mapping of a pixel in a video image comprising: a two dimensional lookup table used for mapping a first pair of red chrominance and

blue chrominance values to a second pair of red chrominance and blue chrominance values; and an interpolator for interpolating a plurality of paired red and blue chrominance values if said second pair of red chrominance and blue chrominance values is not used.”

Applicant respectfully submits that independent Claim 31 contains patentable subject matter since, for example, Matsuoka does not teach each and every element of “a two dimensional lookup table used for mapping a first pair of red chrominance and blue chrominance values to a second pair of red chrominance and blue chrominance values; and an interpolator for interpolating a plurality of paired red and blue chrominance values if said second pair of red chrominance and blue chrominance values is not used,” as recited in Claim 31. Furthermore, each of dependent Claims 32-35 contain patentable subject matter not disclosed in Matsuoka. For example, Matsuoka does not teach “an offset circuitry for adding an offset value to a luminance value associated with said first pair of red chrominance and blue chrominance values,” as recited in Claim 32. Furthermore, the Applicant respectfully submits that dependent Claims 32-35 are allowable because they depend on an allowable Claim 31. Therefore, Claims 31-35 should be passed to allowance.

### CONCLUSION

Based on at least the foregoing, the Applicant believes that Claims 1-35 are in condition for allowance. A Notice of Allowance is courteously solicited. Should anything remain in order to place the present Application in condition for allowance, or should the Examiner disagree or have any question regarding this submission, the Examiner is kindly invited to contact the undersigned at (312) 775-8246.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

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Respectfully submitted,

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